



## CITY AND COUNTY OF DENVER

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Chris Veasey, Ph.D., Manager

Environmental Protection Division  
1391 Speer Boulevard, Suite 700  
Denver, CO 80204-2555  
PHONE: (720) 865-5452  
FAX: (720) 865-5535  
[www.denvergov.org/deh](http://www.denvergov.org/deh)

July 19, 2002

Ms. Bonnie Lavelle  
U.S. Environmental Protection Agency  
Region VIII  
999 18<sup>th</sup> Street, Suite 500  
Denver, CO 80202-2466

RE: Proposed plan for cleaning up residential soils within the Vasquez Boulevard & Interstate 70 Superfund site, Denver, Colorado, May 2002

Dear Ms. Lavelle:

Thank you for the opportunity to review the draft Proposed Plan for arsenic and lead in soil at the Vasquez Boulevard/I-70 (VB/I-70) site, that was provided to the VB/I-70 Working Group on May 16, 2002. We have the following comments:

1. We strongly agree with the sentiment repeatedly expressed by community members during public meetings, "it is important to begin cleaning up the site as soon as possible." We support efforts to sign a record of decision (ROD) and begin remedial activities as soon as possible. We suggest that changes to the ROD or other site activities can be evaluated as the project progresses. At a minimum, the 5-year review process allows for a comprehensive review of the effectiveness of the remedy. If needed, changes in the selected remedy could be implemented at that time, if supported by appropriate data.
2. DEH supports the proposal to "...clean the worst first." Given the number of properties that require cleanup, it is extremely unlikely that the remedy will be completed within the span of one or two years. In addition, there is a strong possibility that the cleanup timeframe may be extended because of federal budget constraints. It is important that properties with higher levels of contamination, and properties at which small children reside, are prioritized for cleanup. A prioritization process should be developed during the remedial design phase, with community input, that considers both the likelihood of exposure, as well as contaminant concentrations. Elevated properties with, or regularly visited by, young children should be placed at a higher priority than elevated properties

without young children, just as more highly contaminated properties should be a higher priority than those with lower levels of contamination.

3. DEH strongly supports the implementation of a community health program for lead and arsenic, as part of the VB/I-70 site remedy. The community health program can provide numerous benefits to this community. These include:
  - a. Most importantly, the community health program will help prevent children's exposures before they occur, through education and outreach activities. The program should be designed to minimize children's exposures to lead and arsenic, by raising awareness of potential harm and providing community education on ways to reduce exposure.
  - b. Minimizing potential exposures during the timeframe in which the remedy is being implemented, but is not yet complete.
  - c. Addressing environmental justice concerns regarding exposure to environmental contaminants. Especially for lead, it is well documented that there are multiple potential sources of exposure, including deteriorated lead-based paint, the predominant source of exposure for most children. The community health program is essential to identify children at risk from all sources of lead, including sources other than soil.
  - d. Ensuring that community members are appropriately tested for exposure to the contaminants of concern.
  - e. Ensuring that community members with elevated levels of exposure are provided with appropriate follow-up investigation, referral, and mitigation.
  - f. The community becomes an integral component of ensuring that a protective remedy is implemented.
  - g. Identifying and providing interventions for children exhibiting pica behavior. Typically, pica children require additional interventions than provided by a simple soil removal program. This is because they are at risk for health effects from contaminants such as lead in soil, even at urban background levels.
  - h. Verification of remedy effectiveness. It is important to collect data on *remedy effectiveness to ensure that a protective remedy has been selected*. Data can be evaluated periodically to address community concerns regarding the protectiveness of the remedy. At a minimum, the data can be used during the five-year review process.
4. We agree that education, biomonitoring, and response are essential to the success of a community health program. It is critical that the community health program be community-based. Community members must be involved and be integral in the design and implementation of the program. The education and outreach efforts should be community-based, culturally-appropriate, flexible, sustainable, and implemented by community members whenever possible. For example, the educational effort could include an outreach effort staffed by community lay health workers that are trained and paid a stipend, to contact their neighbors providing health messages in the manner most appropriate to the target audience (verbally, written materials, demonstrations, etc.).

Also, the program must be flexible, because the approach used in one neighborhood may not be appropriate for another neighborhood. For example, in some communities it may be decided that a mass media campaign (e.g., television, radio) would meet program goals, but in another an outreach effort in the churches or schools might work better. The community health program should be flexible enough to accommodate and encourage different approaches for different communities.

5. The community health program must be of sound design and contain sustainable elements, that provide a measurable community health benefit. The program must include performance goals, so that the success of the program can be judged. Performance goals should be set for things like measures of hazard awareness, numbers of successful contacts made, and participation rates in biomonitoring events. For example, if minimum participation rates were not met for biomonitoring (to ensure adequate sampling of the community), then a reevaluation and redirection of outreach efforts would be required. The health program must have a comprehensive and sound design to ensure sustainability and effectiveness, and so progress towards these goals can be measured.
6. If elevated cases of exposure are identified from biomonitoring activities, each must be investigated individually, to ascertain the source of exposure. In Denver, DEH already performs investigations for children with elevated blood lead levels. Investigations conducted for cases identified within the VB/I70 site should follow similar protocols, be documented appropriately, and be coordinated with DEH. DEH has responsibility for management of elevated blood lead cases in Denver, and wishes to ensure that cases identified through site biomonitoring activities are investigated and managed appropriately. This is important because individual cases may require management by DEH, even after a VB/I-70 health program is discontinued.
7. After case investigations are completed, we suggest that proposed response actions for each case be reviewed by a multi-agency team, that includes the participation of a community member. We believe this team could function and yet maintain patient confidentiality concerns, that are mandated by Colorado statute. This team approach would help assure that all parties understand and become comfortable with assignment of exposure source, as well as response actions, for each case. DEH would like to participate on this evaluation team (for arsenic as well as lead). It is expected that this team would be charged with reviewing whether appropriate response activities were being considered and implemented, including the removal of soil when appropriate. In addition, this team could act as an unofficial review board, to help assess the appropriateness and effectiveness of the selected site remedy.
8. In briefly reviewing the budget for the community health program presented in the feasibility study, we suggest that it may be insufficient to fund a comprehensive community-based health program. We suggest EPA re-evaluate the proposed budget to ensure that sufficient funding is provided for a truly community-based health program. Extensive outreach and educational efforts,

through a variety of time-intensive methods, such as door-to-door contacts, will be needed to ensure that the program reaches every community member.

9. We are very concerned regarding the potential for insufficient funding available for cleanups from the Superfund trust fund. We encourage EPA Region VIII to make every effort to ensure funding for remedial activities at the VB/I-70 site, including expediting decisions that may increase the opportunity for funding. Should the competition for limited funds affect the remedial schedule, we encourage the prioritization of cleanups, as discussed in comment #2.
10. EPA must fund community health program activities during the period of cleanup, even if EPA should decide to select a cleanup alternative that does not contain a community health program action (e.g., EPA alternative 5). We make this distinction, to emphasize the difference between “health program activities” (e.g., education/outreach, biomonitoring, response) that might occur only during the period of cleanup, versus a “community health program” that has been described by EPA as having a more extended existence to satisfy remedial action objectives. The implementation of health program activities during the period of cleanup would ensure that exposure risks are minimized until individual properties are addressed. This is doubly important if the period of cleanup is extended because of funding limitations.
11. We concur with EPA’s goal of sampling all properties not yet sampled, which is included as an action under all proposed cleanup alternatives. An additional benefit of outreach activities conducted under the community health program would be to increase property-owner’s participation in the sampling program.
12. Of the cleanup proposals presented for the site, EPA’s preferred alternative, alternative number 4, best addresses our concerns for ensuring community health in the VB/I-70 site. Alternative 4 includes soil sampling for properties not yet sampled, soil removal and replacement for properties with arsenic levels greater than 128 ppm and/or lead levels greater than 540 ppm, and a community health program.

DEH has heard many in the community suggest an alternate cleanup scenario, in which arsenic is cleaned to 128 ppm (as per EPA alternative number 4), but lead is cleaned to 400 ppm. We agree with these community members that any lowering of a soil cleanup value results in reduced risk for a child exposed to soil. However, the majority of children in the site are at greater risk from exposure to lead in lead-based paint, than to lead in soil. A recent federal report on childhood lead poisoning reaffirms that children at the highest risk of lead poisoning are those living in pre-1960 housing, particularly if those children are from low-income families (Federal Taskforce, 2000). This is reinforced by our own experiences in investigating children with elevated blood lead levels.

The vast majority of houses in the VB/I-70 area were built prior to 1960<sup>1</sup> and many of the children in the VB/I-70 area are from low-income families. Pre-1960 homes with paint in a deteriorated condition (paint condition is typically worse in low-income areas, especially if populated by rental homes) are likely to contain lead-based paint hazards for young children. A soil cleanup level of 400 ppm would result in a marginal added reduction in risk for children whose primary exposure is to lead-based paint. Additionally, several studies of lead in soil have shown very little reduction in levels of lead in children's blood, when soil levels are reduced by 1000 ppm (e.g., EPA 1993, Weitzman, et al. 1993).

We believe that a well-funded, well-designed, and well-implemented community health program (as discussed in our comments above) coupled with soil cleanups under EPA's alternative 4, will provide greater overall risk reduction for the majority of children in the VB/I-70 communities, than merely reducing the cleanup value to 400 ppm lead in soil. This, along with the other benefits of the community health program, some of which are enumerated above, lead us to conclude that EPA's preferred alternative would best protect the health of site residents. We believe the community would benefit more from a lead cleanup value of 540 ppm coupled with a community health program, than a cleanup level of 400 ppm with no community health program.

13. We agree with EPA's intent to provide "comfort letters" to property owners as soon as appropriate, indicating that their property is clean. The Superfund process is long and arduous for many landowners within the site, and should be completed as soon as possible, to remove any real or perceived stigma of Superfund.
14. EPA has identified VB/I-70 as an environmental justice site, indicating that individuals in the site are disproportionately affected by health concerns other than arsenic and lead in soil, as identified under the Superfund program. Because of concerns for environmental justice, we suggest EPA include a health study as one component of the proposed community health program. A main goal of the health study would be to determine if the health of community members is being, or has been, adversely affected by the presence of arsenic in their soil. We believe it is important to make this determination, given the uncertainty of exposures for longtime residents. A health study would address community concerns and provide some level of confidence that proposed remedial activities are adequately health protective. We understand that ATSDR and EPA currently are funding an exposure study focusing on children's exposures to arsenic and lead, and applaud that effort. The long-term health effects of exposure should also be considered and studied.
15. Because VB/I-70 is an environmental justice site we suggest that it is important to understand cumulative health risks for the affected communities. As described by EPA in the past, a critical component to understanding environmental health risk in an environmental justice community would include the collection and evaluation of additional data to identify and target the largest contributors to

---

<sup>1</sup> At properties already sampled by EPA, 95 percent of houses were built before 1960 (CDPHE 2002).

health risks for residents. We encourage EPA to perform such an evaluation, given environmental justice concerns, and the cumulative risks likely present for site residents from things other than arsenic and lead in soil.

16. Because of local drought conditions, we suggest EPA offer residents a xeriscape landscaping option, for properties requiring soil removal and replacement. EPA should investigate if this option could be offered to residents for a cost comparable to standard landscape replacement. Not only would this reduce water use, but would help ensure that soil cover remains in place even during drought conditions. Soil cover is important to reduce windblown fugitive dust, even for clean replacement soil.

#### **References:**

CDPHE. 2002. Electronic summary of age of housing data for houses sampled by U.S. EPA at VB/I-70 Superfund site. Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division. Age of construction data from City and County of Denver Assessor's Office.

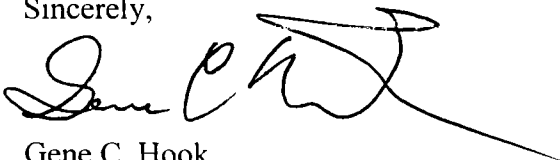
EPA. 1993. Urban soil lead abatement demonstration project. Volume I. Integrated report. United States Environmental Protection Agency, Office of Research and Development, Washington, D.C. July.

Federal Taskforce. 2000. Eliminating Childhood Lead Poisoning: A federal strategy targeting lead paint hazards. President's taskforce on environmental health risks and safety risks to children. February.

Weitzman, M., A. Aschengrau, D. Bellinger, R. Jones, J.S. Hamlin, and A. Besier. 1993. Journal American Medical Association, Vol. 269, 13: 1647-1654.

Thank you for this opportunity to comment. If you have any questions, please contact Celia VanDerLoop at 720 865-5459, or me at 720 865-5443.

Sincerely,

A handwritten signature in black ink, appearing to read "Gene C. Hook", with a long, sweeping horizontal line extending to the right.

Gene C. Hook  
Environmental Protection Division

cc: VB/I70 Working Group